REMARKS

Claims 20-22 remain in this application and have been amended herewith in response to certain Section 112 rejections. Matters of antecedent basis and parallel claim terminology have been corrected herewith. The term "critical particulate volume" has been revised to read "critical particulate solids volume concentration" in order to conform this term with its definition in the specification. At page 32, fourth full paragraph, the specification sets forth that a critical particulate solids volume concentration is defined as the concentration of particulate solids at which the volume of the carrier is just sufficient to fill the voids and interstices among the particulate solids particles. This same specification passage goes on to say that when the solids are higher in proportion, the formulation is starved for carrier (polymer base and plasticizer) and voids occur within the mass of the media. One skilled in the art appreciates that voids in a polishing or abrasive medium would be inherently undesirable and would therefore appreciate the significance as well as the meaning of this claim language.

Claims 20-22 stand rejected for asserted anticipation and/or obviousness over Rhoades '191, Rhoades '057 or Rhoades '247. None of these references alone or together teaches a critical claimed feature of claims 20-22, however, namely, that of said medium's being characterized as having a static viscosity of from about $\eta = 2 \times 10^4$ Centipoise to about $\eta = 8 \times 10^6$ Centipoise and having from 50% to about 99% deflection by elastic deformation at the same time. The above two causally connected features of the invention are described, for example, in the specification at the paragraph bridging pages 33 and 34, which is to say that the claimed viscosity corresponds to the claimed elastic deformation.

Static viscosity is, of course, measured at operating conditions and not some other arbitrary condition. The importance of having elastic deformation of 50% or greater, i.e., 50% to about 99% deflection by elastic deformation, is that as much or more of the medium than not is actively engaged with the surface being treated. In other words, because it is elastic deformation which drives the honing of the treated surfaces by the abrasive particles because the elastic deformation brings the medium into intimate contact with the surface to be treated, a critical feature of such a medium would be for at least half or more of the medium to be performing its intended function at any given time. Stated yet another way, Applicants have discovered a way to avoid the undesirable scenario in which less than half of

the medium were actually deployable to its intended purpose, as long as the viscosity parameter of $\eta = 2 \times 10^4$ Centipoise to about $\eta = 8 \times 10^6$ Centipoise is observed. These two corresponding and critical mathematic parameters of the claims are not mentioned or even hinted at in any of the Rhoades references of record, or in any prior art reference of which Applicants is aware.

The entry of the amendments to claims 20-22, and their allowance, are respectfully requested. If any issue remains for resolution prior to the allowance of the claims and this patent application as a whole, the undersigned would very much appreciate a telephone call at the telephone number listed below.

Respectfully submitted,

WEBB ZIESENHEIM LOGSDON
ORKIN & HANSON, P.C.

By _____

Barbara E. Johnson
Registration No. 31,198
Attorney for Applicants
700 Koppers Building
436 Seventh Avenue
Pittsburgh, Pennsylvania 15219-1818
Telephone: 412-471-8815
Facsimile: 412-471-4094